1) LCD: $10y$

$$\frac{y+3}{y} - \frac{4}{5} = \frac{7}{10}$$

$10(y+3) - 8y = 7y$

$10y + 30 - 8y = 7y$

$2y + 30 = 7y$

$-2y \quad -2y$

$30 = 5y$

$6 = y$

2) LCD: $10y$

$$\frac{3}{y} + \frac{1}{2y} = \frac{4}{5}$$

$30 + 5 = 8y$

$35 = 8y$

$\frac{35}{8} = y$

3) *(This is the only reminder on sheet, don't need LCD.)*

$$\frac{x}{14} = \frac{13}{7}$$

$x = 26$

4) LCD: $3(r-5)$

$$1 - \frac{r}{r-5} = \frac{2}{3}$$

$3(r-5) - 3r = 2(r-5)$

$-3r - 15 - 3r = 2r - 10$

$-15 = 2r - 10$

$+10 \quad +10$

$-5 = 2r$

$-\frac{5}{2} = r$

4) LCD: $10x(4x-5)$

$$\frac{2}{4x-5} = \frac{3}{10x}$$

$20x = 3(4x-5)$

$20x = 12x - 15$

$-12x \quad -12x$

$8x = -15$

$x = -\frac{15}{8}$

6) LCD: 30

$$\frac{x}{6} = \frac{7x-2}{10} - \frac{3}{5}$$

$5x = 3(7x-2) - 18$

$5x = 21x - 6 - 18$

$5x = 21x - 24$

$-21x \quad -21x$

$-16x = -24$

$x = \frac{3}{2}$

7)

$$\frac{8}{9} = \frac{k}{27}$$

$24 = k$

8) LCD: $7(x-4)$

$$\frac{2x+3}{x-4} = \frac{5}{7}$$

$7(2x+3) = 5(x-4)$

$14x + 21 = 5x - 20$

$-5x \quad -5x$

$9x + 21 = -20$

$-21 \quad -21$

$9x = -41$

$x = -\frac{41}{9}$

7) LCD: $24(3a-1)$

$$\frac{1}{8} + \frac{a-2}{3a-1} = \frac{2}{6}$$

$3(3a-1) + 24(a-2) = 8(3a-1)$

$9a - 3 + 24a - 48 = 24a - 8$

$33a - 51 = 24a - 8$

$-24a \quad -24a$

$9a - 51 = -8$

$+51 \quad +51$

$9a = 43$

$a = \frac{43}{9}$

10)

$$\frac{3x-5}{x} = 4$$

$3x - 5 = 4x$

$-3x \quad -3x$

$-5 = x$

11) LCD: $2y(3y+4)$

$$\frac{5}{3y+4} = \frac{7}{2y}$$

$10y = 7(3y+4)$

$10y = 21y + 28$

$-21y \quad -21y$

$-11y = 28$

$y = -\frac{28}{11}$

12)

$$\frac{x}{18} = \frac{5}{6}$$

$x = 15$